

### REMARKS

Claims 1-19 are pending in this application. Claims 1-19 stand rejected. In light of the remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

Each of independent claims 1, 10, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,742,352 (“Tsukagoshi”) in view of U.S. Patent No. 6,571,220 (“Ogino”). Applicant respectfully requests reconsideration and withdrawal of this rejection.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine references to arrive at the claimed subject matter. The prior art references must teach or suggest all of the limitations of the claim in question. See, M.P.E.P. § 706.02(j). A reference can only be used for what it clearly discloses or suggests. See, In re Hummer, 113 U.S.P.Q. 66 (C.C.P.A. 1957); In re Stencel, 4 U.S.P.Q.2d 1071, 1073 (Fed. Cir. 1987). Here, there is no motivation to combine the references nor is there a disclosure of each claim limitation.

As recited in claim 1, a digital watermark is embedded in a digital video stream and the watermarked video stream is multiplexed with a text data stream. The watermark is embedded in the video stream, rather than in the text data stream. At a receive site, a synchronizer performs synchronization between a demultiplexed video and text data stream in response to the detection of the watermark.

In the Tsukagoshi reference, a caption bit stream is disclosed. The caption bit stream is a text data stream. As described in column 13, lines 34 to 44, the caption bit stream contains a system header and a subtitle header. The system header contains a time stamp and the subtitle header contains a repeat time, display start position and display end position. The control data is input to a controller 35 (Fig. 7) which controls a caption decoding device 7 (Fig. 6) in synchronization with horizontal and vertical sync timing signals. In this way, synchronization signals are embedded in the text data stream (caption bit stream) to cause it to synchronize to the horizontal and vertical sync of a video signal.

In Ogino, copy control information 25 is converted to a spread spectrum signal with a spread code 23 in a spreader 24. In a watermark superimposing unit 27, the spread spectrum control information is superimposed on a video signal as a watermark (Fig 3). The spreading of the copy control information has the effect of superimposing the control information at a lower level than the dynamic range of the video signal (column 8, lines 52-54) and has the effect of detecting the control information as a narrowband signal (column 9, lines 1-2).

Since Tsukagoshi relates to a technique in which sync signals are embedded in a text data stream and Ogino relates to the embedding of a narrowband control information, the combined teaching suggests that a narrowband control information is embedded in a text data stream. Therefore, the alleged combination of the prior art references could result in a product totally different from the present invention.

As discussed above, in the present invention, the synchronization signal is embedded in the video stream as a watermark, rather than in the text data stream. The embedded watermark is detected at a receive site and the text data stream is synchronized to the video stream in response to the detection of the watermark.

As described on page 1 of the specification, for standard digital television broadcasting, it is contemplated to multiplex text data with a video signal using vertical blanking intervals. For this purpose, a number of text data are multiplexed in a video program and each text data stream is associated with a particular series of video frames, or "events" so that each text appears on the screen of television receivers simultaneously with the associated event. In order for television receivers to synchronize a text data stream with the associated event, it is necessary for the broadcasting station to transmit timing information along with a video signal.

The prior art thus requires events-related information to be embedded in a video signal and timing information to be transmitted with the video signal so that events are displayed at specified times. In the Tsukagoshi patent, the repeat time, display start position and display end position are the event-related information. If such event-related information are not embedded, it is not necessary to transmit timing information.

By embedding a watermark in the video stream as a sync signal to enable the video stream to be synchronized to the text data stream, the present invention eliminates the need to embed event-related information in the text data stream and the need to transmit timing information.

The cited prior art fails to appreciate the advantage of embedding a watermark in a video stream to synchronize it to a text data stream.

The Examiner asserts that the suggestion or motivation to combine the references is found in the knowledge generally available to one of ordinary skill in the art. See Office Action at 2. However, the Examiner has set forth no reference to show that the above-recited combination would be generally available to one of ordinary skill in the art. The Examiner asserts that one of ordinary skill in the art would have been motivated to make the combination “because using digital watermarks deters piracy and helps to protect owners’ rights to digital material”. However, this does not explain why one would be motivated to combine these references. If the Examiner cannot cite a reference which provides the motivation to combine these references, Applicant requests an Examiner’s Affidavit indicating that such knowledge is known so that Applicant can rebut such assertion. See M.P.E.P. § 2144.03.

The Office Action asserts that Ogino discloses an imbedding circuit for imbedding a digital watermark in a digital video stream, which is incorrect for the reasons discussed above, as well as a digital watermark detector for detecting the digital watermark embedded in the recovered digital video screen. However, it does not say why one would be motivated to modify the Ogino system and then include the elements disclosed in Tsukagoshi.

As applied to the determination of patentability when the issue is obviousness, “it is fundamental that rejections under 35 U.S.C. § 103 must be

based on evidence comprehended by the language of that section.” In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775(Fed. Cir. 1983). The essential factual evidence on the issue of obviousness is set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008(Fed. Cir. 2001) (“the central question is whether there is reason to combine [the] references,” a question of fact drawing on the Graham factors).

“The factual inquiry whether to combine references must be thorough and searching.” Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) (“a showing of a suggestion, teaching, or motivation to combine the prior art references is an ‘essential component of an obviousness holding’”) (quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed. Cir. 1998)); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617(Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement

for a showing of the teaching or motivation to combine prior art references.”); In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637(Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600(Fed. Cir. 1988) (“teachings of references can be combined only if there is some suggestion or incentive to do so.”) (quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933(Fed. Cir. 1984)).

The need for specificity pervades this authority. See, e.g., In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317(Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.

In other words, the Examiner must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”. See, In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783(Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of

ordinary skill in the art would lead that individual to combine the relevant teachings of the references”).

With respect to the present application, the Examiner has not adequately supported the selection and combination of Tsukagoshi and Ogino to render obvious that which is claimed. The Examiner’s conclusory statement that “Tsukagoshi could include the watermark embedding and detection disclosed by Ogino. Further, the synchronizing of text and video streams could be in response to the detection of a digital watermark for the video screen. Office Action at 6. The Examiner asserts that at the time of the invention, one would have been motivated to make the above system “because using digital watermarks deters piracy and helps to protect owners’ rights to digital materials.” Id. These statements do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective believe and unknown authority. It is improper in determining whether a person of ordinary skill would have been led to this combination of references simply using the present specification as a road map. Further, by merely stating that something could be done, the Examiner is improperly taking official notice of the possible combination.

The Federal Circuit has repeatedly found that there must be a specific hint or suggestion in a particular reference to support a combination. See, e.g., In re Lee, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Deficiencies in the cited reference cannot be remedied by general conclusions about what is basic knowledge or common sense. Common knowledge and common sense do not substitute for

authority when the law requires authority. See, Allentown Mack Sales and Service, Inc. v. NLRB, 522 U.S. 359, 376 (1998).

Thus, the Examiner cannot rely on conclusory statements without support. Therefore, as discussed above, it is clear that there is no motivation to combine these references and Applicant respectfully requests reconsideration and withdrawal of the rejection.

Applicant reasserts that the Office action is attempting to take official notice that the synchronizing of the text and video streams is done in response to detection of a digital watermark in the video stream. The Office Action fails to disclose a reference in which this is performed. The Office Action merely asserts that it could be done. Applicant again insists that the Examiner is taking official notice and that this is improper. Whether synchronization could be done in response to the detection of a digital watermark is exactly the type of thing that official notice may not be relied upon for. See, M.P.E.P. § 2144.3(a) (“we reject the notion that judicial or administrative notice may be taken of the state of the art.” The facts constituting the state of the art are normally subject to the possibility of rational disagreement upon reasonable men and are not amenable to taking such notice.” Citing, In re Eynde, 480 F.2d 1364, 1370 (C.C.P.A. 1973). (Emphasis added.)

In view of the fact that the M.P.E.P. specifically states that official notice may not be used with regard to the state of the art, the Examiner is requested in the next Office Action to either allow the pending claims or provide evidence that “the



synchronizing of text and video streams could be in response to the detection of digital watermark or in a video stream". Of course, if the Examiner cannot find such a reference, these claims all should be allowed.

Claims 2-9 depend either directly or indirectly from, and contain all the limitations of claim 1. These dependent claims also recite additional limitations which, in combination with the limitations of claim 1, are neither disclosed nor suggested by Tsukagoshi and are also believed to be directed towards the patentable subject matter. Thus, claims 2-9 should also be allowed.

Claim 11 depends from, and contain all the limitations of claim 10. This dependent claim also recites additional limitations which, in combination with the limitations of claim 10, are neither disclosed nor suggested by Tsukagoshi and are also believed to be directed towards the patentable subject matter. Thus, claim 11 should also be allowed.

Claims 13-19 depend either directly or indirectly from, and contain all the limitations of claim 12. These dependent claims also recite additional limitations which, in combination with the limitations of claim 12, are neither disclosed nor suggested by Tsukagoshi and are also believed to be directed towards the patentable subject matter. Thus, claims 13-19 should also be allowed.

Applicant has responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

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Respectfully submitted,

By 

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